adjusting a discontinuous component in a frequency domain of a first pixel of the plurality of pixels located at the block boundary based on a corresponding component in the frequency domain of a second pixel of the plurality of pixels near the block boundary; and

applying the adjusting operation to a spatial domain of the first pixel to reduce a blocking artifact]

defining pixels, S_0, S_1, and S_2 centering around a block boundary;

obtaining a mode determination value to selectively determine a deblocking mode as a default mode or a DC offset mode in accordance with a degree of the blocking artifact;

B1 cont'd

obtaining frequency information of the surroundings of the block boundary for each pixel, using a 4-point kernel, if the default mode is determined;

adjusting a magnitude of a discontinuous component, belonging to the block boundary, to the minimum value of a magnitude of a discontinuous component, belonging to the surrounding of the block boundary, in a frequency domain, and applying said adjusting operation to a spatial domain; and

reducing the blocking artifact in a smooth region where there is little motion, such as a setting, if the DC offset mode is determined.

2. (Amended) The method according to claim 1, wherein the [selecting] obtaining through [applying] adjusting steps are performed in ~~a first~~ the default mode.

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3. (Amended) The method according to claim 1, wherein a magnitude of the discontinuous component in the [first] S_0 pixel is adjusted to a magnitude of the corresponding component in [the] a second pixel, wherein the magnitude of the corresponding component in the second pixel is based on a smallest value of corresponding component magnitudes in [remaining] the S_1 and S_2 pixels [of the plurality of pixels].

B1 Cont'd

4. (Amended) The method according to claim 3, wherein the adjusting step satisfies at least one of the following conditions:

$v_3' = v_3 - d$; and

$v_4' = v_4 + d$; where $d = \mathrm{CLIP}\,(c_2(a_{3,0}' - a_{3,0})//c_3, 0, (v_3 - v_4)/2) * \delta(|a_{3,0}| \langle QP)$,

$a_{3,0}' = \mathrm{SIGN}(a_{3,0}) * \mathrm{MIN}(|a_{3,0}|, |a_{3,1}|, |a_{3,2}|)$, wherein v_3 - v_4 are initial boundary pixel values, v_3' - v_4' are adjusted boundary pixel values, $a_{3,0}$ - $a_{3,2}$ are the discontinuous component of the discrete cosine transform coefficients of the [first

and second] $\underline{S_0, S_1 \text{ and } S_2}$ pixels, c_2 and c_3 are DCT kernel coefficients and QP is a quantization parameter of a macroblock containing v_4.

5. (Amended) The method according to claim 3, wherein the [remaining] $\underline{S_1 \text{ and } S_2}$ pixels [of the plurality of pixels] are positioned within a block adjacent the block boundary.

B1 cont'd

6. (Amended) The method according to claim 1, further comprising:

determining a smoothness level of the plurality of pixels; and

selecting one of [a first and a second] the default mode and the DC offset mode based on the smoothness level, wherein the blocking artifact is reduced based on the selected mode.

7. (Amended) The method according to claim 6, wherein the [second] DC offset mode is selected when the following condition is satisfied: ($v_0 == v_1 \&\& v_1 == v_2 \&\& v_2 == v_3 \&\& v_4 == v_5 \&\& v_5 == v_6 \&\& v_6 == v_7$), wherein v_0 - v_7 are boundary pixel values.

B1 Conc

8. (Amended) The method according to claim 6, wherein in the [second] DC offset mode is selected for a region of the motion picture where there is little motion.

10. (Amended) The method according to claim 6, wherein the adjusting step in the [second] ~~default~~ DC offset mode satisfies at least one of the following conditions:

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$v_3' = v_3 - d;$

$v_4' = v_4 + d;$

$v_2' = v_2 - d_2;$

B2

$v_5' = v_5 + d_2;$

$v_1' = v_1 - d_3;$ and

$v_6' = v_6 + d_3$, where $d_1 = (3(v_3 - v_4)//8)*\delta(|a_{3,0}|\langle QP)$,

$d_2 = (3(v_3 - v_4)//16)*\delta(|a_{3,0}|\langle QP)$, and

$d_3 = (3(v_3 - v_4)//32)*\delta(|a_{3,0}|\langle QP)$, wherein v_0 - v_7 are initial boundary pixel values, v_1' - v_6' are adjusted boundary pixel values, $a_{3,0}$ is the discontinuous component of the discrete cosine transform coefficients of [the] a first pixel belonging at the block boundary and QP is a quantization parameter of a macroblock containing v_4.